



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,770.	12/12/2003	Kun-Hee Suh	7337	8737

39196 7590 10/20/2006

SHLESINGER, ARKWRIGHT & GARVEY LLP
1420 KING STREET
SUITE 600
ALEXANDRIA, VA 22314

EXAMINER

KEMMERLE III, RUSSELL J

ART UNIT PAPER NUMBER

1731

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,770

Applicant(s)

SUH, KUN-HEE

Examiner

Russell J. Kemmerle III

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9 June 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "20" on Fig. 3. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Page 3 line 11; the term "noninflammable" appears to be a mistyping of either "nonflammable" or "inflammable" (this also occurs on Page 6 line 2, page 10 line 11, and other places throughout the specification);

The entire specification appears to be a direct translation from a foreign language, and contains many instances of improper grammar or missing words (for example, page 3 line 15 "has not commercially produced" instead of "has not been commercially produced" or page 4 lines 17-18 "the present inventor have make many studies" instead of the "the present inventor has made many studies", and many other instances throughout the specification). It is recommended that the applicant or their representative reread the specification and make appropriate changes to ensure that it is in proper idiomatic English.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 recites the limitation "each mold" in step "d". There is insufficient antecedent basis for this limitation in the claim since previous references in the claim are only to one mold.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Billwiller (0,831,321).

Billwiller discloses forming an insulating block by creating an aqueous paste of water, magnesium oxide and vegetable fiber, and pressing that paste in order to obtain the desired shape of the block (Claim 6, Col 1 lines 24-25).

Thus, Billwiller discloses or reasonably suggests every limitation of claim 5, and thus anticipates the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billwiller in view Ghosh (6,649,436).

Billwiller is relied upon as discussed above.

Billwiller does not disclose the method of creating an insulating piece where the aqueous paste is formed into the final product by applying pressure in a mold that has been heated.

Ghosh discloses creating a piece from a ceramic/organic mixture involving placing the mixture into a die and applying pressure, with the die being heated before or during the pressure being applied (Col 13 lines 17-31).

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant to have combined the method disclosed by Billwiller of creating an aqueous paste of water, magnesium oxide and vegetable fiber with the method taught by Ghosh of forming a ceramic/organic mixture into a final piece by applying pressure through a mold at an elevated temperature, since Ghosh discloses that this is an effective method for creating a desired final product, and that the increased temperature during pressing can provide increased densification (Col 8 lines 30-33).

Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Billwiller in view of Suh (4,548,773).

Billwiller is relied upon as discussed above.

Billwiller does not disclose the method of creating an insulating piece where the aqueous paste is formed into the final product by injection molding and heating the injection mold.

Suh discloses a device that can be used for injection molding a ceramic material to create a desired final shape where the mold includes heating means to increase the temperature of the mold while the ceramic article is being formed (Col 1, lines 7-17, Col 3 lines 56-58).

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have combined the method disclosed by Billwiller of creating an aqueous paste of water, magnesium oxide and vegetable fiber with the method taught by Suh of injection molding a ceramic material in a mold containing means for

heating the mold since Suh discloses that this is an effective means for forming a ceramic article.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Billwiller in view of Takahasi (4,764,102).

Billwiller is relied upon as discussed above.

Billwiller does not disclose the method of creating an insulating piece where the aqueous paste is formed into the final product by extruding the paste and passing it through a heating device positioned at the outlet of the extruder.

Takahashi discloses a method of forming a ceramic article where a ceramic material is extruded to form the desired shaped, and the extruded ceramic article is passed through a dryer and a firing furnace positioned at the outlet of the extruder (Abstract).

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have combined the method disclosed by Billwiller of creating an aqueous paste of water, magnesium oxide and vegetable fiber with the method taught by Takahashi by extruding the aqueous paste and passing it through a heating device positioned at the outlet of the extruder since Takahashi discloses that this is an effective way of forming a ceramic article.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell J. Kemmerle III whose telephone number is


Art Unit: 1731

571-272-6509. The examiner can normally be reached on Monday through Friday, 8:30-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RK


CHRIS FIORILLA
SUPERVISORY PATENT EXAMINER
Art 17.3Y